

New Jersey Department of Environmental Protection
Division of Water Supply
Bureau of Safe Drinking Water
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**Instructions for Completing the
Drinking Water Analysis - Radionuclide Report Form**

NOTE: The original laboratory data sheet must be attached to the Drinking Water Analysis – Radionuclide Report Form.

A community water system must complete a form for each point of entry to the distribution system (POE) required to monitor for radionuclides. A form for each POE must be submitted to the Bureau of Safe Drinking Water for each quarter.

In addition to this Instruction Guide, the reader should also review the “Summary of Radionuclide Rule Requirements” prepared by the Bureau of Safe Drinking Water.

The numbers on this instruction sheet correspond to the numbered fields on the attached Drinking Water Analysis - Radionuclide Report Form.

Check the box if more than one sample was taken at the same point of entry during the quarter.

Enter the PWSID, the system name and the facility name.

- (1) **For Compliance? (Y/N):** In this field enter Y if this is a compliance sample. (Samples are almost always going to be submitted for compliance purposes.)
- (2) **Lab Sample Number:** Enter the Lab Sample Number assigned to the sample by the analyzing laboratory.

Gross Alpha, radium-226, radium-228 and uranium must all have the same Lab Sample ID number even if different numbers have been assigned by the laboratory. The Lab Sample ID number links the accompanying analyte results allowing SDWIS to calculate the adjusted gross alpha activity for which the MCL is based.

Enter the word “sub” in this field for radium-226 and uranium if the system elects to use the substitution values.

- (3) **Sample Collection Date:** Enter the date the sample was collected.
- (4) **Sample Collection Time:** Enter the time the sample was collected. This can be entered as a 24 hour clock or by using AM and PM.
- (5) **Water System Facility Code:** Enter the water system facility code. This should be obtained from the Monitoring Schedule. Example: TP001001
- (6) **Sampling Point:** On this form it is the same as (5), Water System Facility Code.
- (7) **Analyzing Lab ID #:** Enter the NJDEP Laboratory Certification ID Number of the laboratory analyzing the sample. Enter "sub" in this field for uranium and radium-226 if the system elects to use the substitution values.
- (8) **Result Value:**

(8a) **for Gross Alpha:** Enter the gross alpha result from the lab data. If the gross alpha was counted twice, according to the Method N.J.A.C. 7:18-6.4 (NJ 48 Hour Rapid Gross Alpha Test) protocol, report the activity result of the second count.

(8b) **for Radium 226:** If the analysis was performed, enter the activity from the lab data. If the analysis was not run, enter the substitution value.

(8c) **for Radium 228:** Enter this value from the lab data.

(8d) **for Uranium (URM):** The value in this field must be reported in mg/L.

If an analysis method was used which gives the result as mass of uranium in units of $\mu\text{g/L}$ or $\mu\text{g/Kg}$, this value must first be converted to mass units of mg/L. Divide the original result (which is in $\mu\text{g/L}$ or $\mu\text{g/Kg}$) by 1000 to get the result in mg/L. Enter this value in *Field 8d*.

The value of uranium in mass units of mg/L must then be converted to activity units of pCi/L in order to complete *Field 8e*. Multiply the value in *Field 8d* (which is uranium in mass units of mg/L) by 670 to obtain the value in activity units of pCi/L. Enter this value in *Field 8e*.

(8e) **for Uranium (4006):** The value in this field must be reported in pCi/L

If an analysis method which gave the result as units of pCi/L was used for uranium, enter the result in *Field 8e*.

If an analysis method was used for uranium with activity units of pCi/L, the result will next have to be converted to mass units of mg/L in order to fill in *Field 8d*. In this situation, take the value in *Field 8e* and divide by 670 to obtain mass units of mg/L. Enter this value in *Field 8d*.

This exercise must also be done if using a substituted value for uranium. The substituted activity result must be converted to mass and entered in Field *8d* for that of Uranium (URM). If substituting, leave Field *8e* blank (this is the activity field for Uranium (4006)).

(9) Result Count Error: Also called Uncertainty Value.

(9a) for Gross Alpha: Enter value from lab data.

(9b) for Radium 226: Enter value from lab data if analysis for radium-226 was performed. If substituting, leave blank.

(9c) for Radium 228: Enter value from lab data

(9d) for Uranium (URM): Not applicable

(9e) for Uranium Activity: If an activity method for uranium was used, enter this value. If using a mass method or substitution value, leave blank.

(10) MDA: This is Minimum Detectable Activity or MDC (Minimum Detectable Concentration).

(10a) for Gross Alpha: Enter value from the lab data. If gross alpha was counted twice only enter the final count MDA.

(10b) for Radium- 226: Enter value from the lab data. Leave blank if using substitution values.

(10c) for Radium- 228: Enter value from the lab data.

(10d) for Uranium (URM): If the lab used a method that reported in mass units, enter the reporting limit in this field. If the lab used a method that reported a result in activity units, leave this field blank. The value must be entered on this Radionuclide Report Form in units of mg/L. Therefore, if the original laboratory form shows a reporting limit in $\mu\text{g/L}$, the result must be divided by 1000 to convert it to mg/L.

(10e) for Uranium (4006): If uranium was analyzed using a method that reports in activity units of pCi/L, enter the value from the lab data. If uranium was analyzed using a mass method, leave this field blank. Leave blank if using substitution values.

(11) Analysis Method:

(11a) for Gross Alpha: The only method allowed is N.J.A.C.7:18-6.4

(11b) for Radium 226: If analysis for radium-226 was performed, enter the method. If substituting, write "SUBST".

(11c) for Radium 228: Enter the method used for analysis.

(11d) for Uranium (URM): If analysis for uranium was performed using a mass method put this method in field **(11d)**. If analysis for uranium was performed using

an activity method leave field (11d) blank. If analysis for uranium was not required and a substitution value was entered in the result field, write SUBST in field (11d). (11e) **for Uranium (4006)**: If analysis for uranium was performed using an activity method put this method in field (11e). If analysis for uranium was performed using a mass method, leave field (11e) blank. If analysis for uranium was not required leave field (11e) blank.

(12) **Analysis Start Date**: Enter the date the analysis started.

(12a) **for Gross Alpha (First/Second)**: If gross alpha was counted twice, enter the start date of each count.

(12b) **for Radium-226**: Enter start date of analysis. If substituting, leave blank.

(12c) **for Radium-228**: Enter start date of analysis.

(12d) **for Uranium (URM)**: Enter date analysis was started if a mass method was used. If an activity method was used, or if a substituted value was used, leave this blank.

(12e) **for Uranium (4006)**: Enter date analysis was started if an activity method was used. Otherwise, leave field blank.

(13) **Analysis Start Time**: Enter the time the analysis started.

(13a) **for Gross Alpha (First/Second)**: If gross alpha was counted twice, enter the start time of each count.

(13b) **for Radium-226**: Enter start time of analysis. If substituting, leave blank.

(13c) **for Radium-228**: Enter start time of analysis.

(13d) **for Uranium (URM)**: Enter start time of analysis. If an activity method or substituted value was used, leave blank.

(13e) **for Uranium (4006)**: Enter start time of analysis. Otherwise, leave this field blank.

(14) **SDWIS Result**: This is the value that will be used for compliance purposes. If the analyte was detected above the regulatory detection limit, the value in this field will be the same as the Result Value Field. If the analyte was analyzed and found to be below the EPA regulatory detection limit, for compliance purposes the value is considered to be zero and it should be entered as "< the regulatory detection limit.," as shown below.

(14a) **for Gross Alpha (4002)**: If gross alpha was detected above the regulatory detection limit of 3 pCi/L, enter the detected value here. If gross alpha was not detected at or above the regulatory detection limit of 3 pCi/L, enter "<3 pCi/L" here.

(14b) **for Radium-226**: If radium-226 was analyzed and was detected above the regulatory detection limit of 1 pCi/L, enter the detected value here. If radium-226 was analyzed and was not detected at or above the regulatory detection limit of 1 pCi/L, enter "<1 pCi/L" here.

(14c) **for Radium-228**: If radium-228 was analyzed and was detected above the regulatory detection limit of 1 pCi/L, enter the detected value here. If radium-228

was analyzed and was not detected at or above the regulatory detection limit of 1 pCi/L, enter "<1 pCi/L" here.

(14d) for Uranium (URM): If uranium was analyzed using a mass method and was detected above the regulatory detection limit of 0.001 mg/L, enter the detected value here. If uranium was analyzed using a mass method but not detected at or above the regulatory detection limit of 0.001 mg/L, enter "<0.001" here. If uranium was determined by substitution, leave this field blank.

(14e) for Uranium (4006): If uranium was analyzed using an activity method and was detected above the regulatory detection limit, enter the detected value here. If uranium was analyzed using an activity method but not detected, leave this field blank.

(15) The regulatory detection limits are as follows:

Gross Alpha (4002):	3 pCi/L
Radium-226 (4020):	1 pCi/L
Radium-228 (4030):	1 pCi/L
Uranium Mass (URM):	0.001 mg/L

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DRINKING WATER ANALYSIS - RADIONUCLIDE REPORT FORM

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Check here if more than one sample was taken during this quarter for this point of entry.

PWSID: NJ		System Name:		Facility Name:		
	Radionuclide (SDWIS #):	Gross alpha excluding radon (4002)	Radium-226 (4020)	Radium-228 (4030)	Uranium (URM)	Uranium (4006)
Sample information	For Compliance? (Y/N)	(1)	(1)	(1)	(1)	(1)
	Lab Sample Number	(2)	(2)	(2)	(2)	(2)
	Sample Collection Date	(3)	(3)	(3)	(3)	(3)
	Sample Collection Time	(4)	(4)	(4)	(4)	(4)
	Water System Facility Code	(5)	(5)	(5)	(5)	(5)
	Sampling Point	(6)	(6)	(6)	(6)	(6)
Sample Results	Analyzing Laboratory ID#	(7)				
	Reg Detection Limit (15)	3 pCi/L	1 pCi/L	1 pCi/L	0.001 mg/L	
	SDWIS Result (14)	(14a) pCi/L	(14b) pCi/L	(14c) pCi/L	(14d) mg/L	(14e) pCi/L
	Result Value (8)	(8a) pCi/L	(8b) pCi/L	(8c) pCi/L	(8d) mg/L	(8e) pCi/L
	Result Count Error (9)	(9a) pCi/L	(9b) pCi/L	(9c) pCi/L		(9e) pCi/L
	MDA (10)	(10a) pCi/L	(10b) pCi/L	(10c) pCi/L	(10d) mg/L	(10e) pCi/L
	Analysis Method (11)	(11a) NJAC 7:18-6.4*	(11b)	(11c)	(11d)	(11e)
	Analysis Start Date (First & Second count) (12)	(12a)	(12b)	(12c)	(12d)	(12e)
Analysis Start Time (First & Second count) (13)	(13a)	(13b)	(13c)	(13d)	(13e)	

***Also known as 48-Hour Rapid Gross Alpha Test**

I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Prepared by: Owner/Operator__ Laboratory__ Consultant__ Other:_____ Phone No. (_____)_____ E-mail: _____

Print name of form preparer

Affiliation

Signature of Form Preparer

Date

- A COPY OF THE ORIGINAL LABORATORY DATA SHEET MUST BE ATTACHED TO THIS FORM.